03050109-150
(Saluda River)

General Description

Watershed 03050109-150 is located in Laurens, Newberry, Saluda, and Greenwood Counties and consists primarily of the *Saluda River* and its tributaries from the Lake Greenwood dam to the Lake Murray headwaters. The watershed occupies 182,044 acres of the Piedmont region of South Carolina. The predominant soil types consist of an association of the Cecil-Pacolet-Wilkes-Herndon series. The erodibility of the soil (K) averages 0.28; the slope of the terrain averages 15%, with a range of 2-45%. Land use/land cover in the watershed includes: 6.54% urban land, 23.54% agricultural land, 1.22% scrub/shrub land, 0.45% barren land, 66.98% forested land, and 1.27% water.

This section of the Saluda River flows out of Lake Greenwood and is joined by Halfway Swamp (Thompsons Creek) and Sharps Branch near the Town of Chappells. Further downstream, Terrapin Creek and Mill Creek enter the river, followed by the Little River watershed (03050109-163), Rocky Branch, and Tosity Creek. Beaverdam Creek (Welch Creek) flows past the Town of Silverstreet and drains into the Saluda River arm of Lake Murray.

The Bush River originates near the City of Clinton where it accepts drainage from Shell Creek (Sand Creek). Further downstream, near the City of Newberry, Rocky Creek, Big Beaverdam Creek (Reedy Creek), and Scott Creek flow into the Bush River. The Bush River then accepts drainage from Timothy Creek (Kinards Creek, Dewalt Creek) near the Town of Prosperity and drains into the Saluda River arm of the lake. Big Creek enters the lake just downstream of the confluence of the Saluda and Bush Rivers. Several small lakes exist in the watershed for recreational and/or irrigational purposes. There are a total of 161.0 stream miles in this watershed, all classified FW. As a reach of the Saluda River, this watershed accepts the drainage of all streams entering the river upstream of the watershed.

Water Quality

Station #	Type	Class	Description
S-186	P	FW	SALUDA RIVER AT SC 34, 6.5 MI ESE OF NINETY SIX
S-295	P	FW	SALUDA RIVER AT S.C. ROUTE 39
S-047	W	FW	SALUDA RIVER AT SC 121
S-310	W	FW	LAKE MURRAY, SALUDA RIVER ARM, 3.8 KM UPSTR OF SC 391
S-042	P	FW	BUSH RIVER AT SC 560 S OF JOANNA
S-046	S	FW	BUSH RIVER AT SC ROUTE 34
S-044	S	FW	SCOTT CREEK AT SC 34, SW OF NEWBERRY
S-102	S	FW	BUSH RIVER AT S-36-41, 8.5 MI S OF NEWBERRY
S-309	W	FW	LAKE MURRAY, BUSH RIVER ARM, 4.6 KM UPSTREAM OF SC 391
S-223	P	FW	LAKE MURRAY AT SC 391 (BLACKS BRIDGE)

***Saluda River* - There are three monitoring sites along this section of the Saluda River, which was Class B until April, 1992. At the upstream site (S-186), aquatic life uses are not supported due to occurrences of copper and zinc in excess of the aquatic life acute standards, compounded by a significant decreasing trend in pH. A significant increasing trend in dissolved oxygen concentration and significant decreasing trends in five-day biochemical oxygen demand and total phosphorus and total nitrogen concentrations suggest improving conditions for these parameters. At the midstream site (S-295), aquatic life uses are not supported due to occurrences of copper in excess of the aquatic life acute standards, compounded by a high concentration of copper measured in 1995. Significant increasing trends in dissolved oxygen and significant decreasing trends in five-day biochemical oxygen demand suggest improving conditions for these parameters. At the downstream site (S-047), there were pH excursions, but due to the small number**

of samples, aquatic life uses are considered to be fully supported. Recreational uses are fully supported at all sites.

***Saluda River Arm of Lake Murray* - Eutrophication assessments indicate that the headwater area of Lake Murray is of intermediate trophic condition compared to other sites in large South Carolina lakes. There are two monitoring stations in this arm of Lake Murray. Aquatic life uses are fully supported at the uplake site (S-310). At the downlake site (S-223), aquatic life uses are partially supported due to occurrences of copper in excess of the aquatic life acute standards. In addition, there was a very high concentration of zinc measured in 1993. A very high concentration of zinc was measured in the 1993 sediment sample, as were high concentrations of nickel and zinc in 1994, and high concentrations of chromium, copper, lead, nickel, and zinc in 1995. In addition, P,P'DDE (a metabolite of DDT) was detected in the 1994 sediment sample. Although the use of DDT was banned in 1973, it is very persistent in the environment. A significant increasing trend in dissolved oxygen concentration and a significant decreasing trend in total phosphorus and total nitrogen concentrations suggest improving conditions for these parameters. Although pH excursions occurred at both sites, they were at the high end, a natural condition in lakes with significant aquatic plant communities. Recreational uses are fully supported at both sites.**

***Beaverdam Creek (S-852)* - This stream was Class B until April, 1992. Aquatic life uses are fully supported based on macroinvertebrate community data.**

***Bush River* - There are four monitoring sites along the Bush River, which was Class B until April, 1992. At the furthest upstream site (S-042), aquatic life uses are not supported due to dissolved oxygen excursions. In addition, there are significant decreasing trends in dissolved oxygen concentration and pH. Significant decreasing trends in five-day biochemical oxygen demand, total phosphorus concentrations, and turbidity suggest improving conditions for these parameters. Recreational uses are partially supported due to fecal coliform bacteria excursions; however a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter.**

Further downstream (S-046), aquatic life uses are fully supported. A significant decreasing trend in turbidity suggests improving conditions for this parameter. Recreational uses are not supported due to fecal coliform bacteria excursions; however a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter. At the next site downstream (S-851), aquatic life uses are fully supported based on macroinvertebrate community data. At the furthest downstream site (S-102), aquatic life uses are fully supported. A significant increasing trend in dissolved oxygen concentration and a significant decreasing trend in five-day biochemical oxygen demand suggest improving conditions for these parameters. Recreational uses are not supported at this site due to fecal coliform bacteria excursions.

***Scott Creek (S-044)* - This stream was Class B until April, 1992. Aquatic life uses are fully supported, but there is a significant decreasing trend in dissolved oxygen. Significant decreasing trends in total phosphorus concentrations and turbidity suggest improving conditions for these parameters. Recreational uses are not supported due to fecal coliform bacteria excursions.**

***Bush River Arm of Lake Murray (S-309)* - The Bush River arm of Lake Murray is among the most eutrophic lake embayments in the state, characterized by high densities of algae and high phosphorus concentrations. Watershed management is recommended to reduce phosphorus loading to this area of the lake. Aquatic life uses are not supported due to pH excursions and eutrophication. Recreational uses are fully supported.**

Permitted Activities

Point Source Contributions

RECEIVING STREAM / *FACILITY NAME* / *PERMITTED FLOW @ PIPE (MGD)* / *COMMENT*	*NPDES#* / *TYPE* / *LIMITATION*
BUSH RIVER	SCG645004
CITY OF CLINTON/GARY STREET	MINOR DOMESTIC
PIPE #: 001 FLOW: VARIABLE	WATER QUALITY
PIPE #: 001 FLOW: 4.8 (PROPOSED)	WATER QUALITY
WQL FOR TRC	
BUSH RIVER	SC0024490
CITY OF NEWBERRY/BUSH RIVER PLANT	MAJOR MUNICIPAL
PIPE #: 001 FLOW: 3.220	WATER QUALITY
PIPE #: 001 FLOW: 4.80 (PROPOSED)	WATER QUALITY
WQL FOR NH3-N, DO, TRC, BOD5	
BUSH RIVER	SC0037974
LAURENS COUNTY WRC/CLINTON	MAJOR MUNICIPAL
PIPE #: 001 FLOW: 2.750	WATER QUALITY
PIPE #: 001 FLOW: 5.50 (PROPOSED)	WATER QUALITY
WQL FOR NH3-N, DO, TRC	
BUSH RIVER	SC0040860
NEWBERRY COUNTY W&S PLT #1	MINOR MUNICIPAL
PIPE #: 001 FLOW: 0.5	WATER QUALITY
WQL FOR NH3-N, DO, TRC, BOD5	

Nonpoint Source Contributions

Bush River/Camping Creek Watershed Study

This was a comprehensive watershed project in a predominantly agricultural watershed. The project was being implemented with several cooperating agencies, with the SC Dept. of Natural Resources as the lead agency. The project area lies mostly in Newberry County and the watershed drainage is to Lake Murray. The project began in 1990, and concluded in August of 1998. The project provided funding for technical and financial assistance to farmers in the watershed for BMPs related to rowcropping and confined animal operations. Innovative BMP demonstrations funded by the project included provision of manure nutrient testing by a mobile laboratory, portable animal waste lagoon pumpout and spray irrigation equipment available for rent by farmers in the watershed, and effective pesticide management.

Landfill Activities

SOLID WASTE LANDFILL NAME	*PERMIT #*

FACILITY TYPE	*STATUS*
NEWBERRY CITY LANDFILL	DWP-023
DOMESTIC	CLOSED

Mining Activities

MINING COMPANY / *MINE NAME*	*PERMIT #* / *MINERAL*
RICHTEX CORP.	0277-24
HICKS MINE	SHALE
RICHTEX CORP.	0155-41
BAUKNIGHT MINE	SHALE

Camp Facilities

FACILITY NAME/TYPE / *RECEIVING STREAM*	*PERMIT #* / *STATUS*
SALUDA RIVER RESORT/FAMILY	23-307-36017
SALUDA RIVER	ACTIVE

Water Supply

WATER USER (TYPE) / *WATERBODY*	*REGULATED CAPACITY (MGD)* / *PUMPING CAPACITY (MGD)*
CITY OF NEWBERRY (M)	12.0
SALUDA RIVER	20.0

Growth Potential

The growth along the Saluda arm of Lake Murray has been strong and is for the most part residential. The Town of Prosperity is serviced by the Newberry County Water and Sewer Authority, which discharges into Bush River. Bush River continues to be limited in terms of assimilative capacity, and as such there has been discussion among various sewer providers in the county for a larger regional facility which would discharge within 03050109-190, as well as some discussion for a single entity water and sewer provider for the lower part of Newberry County. This would in turn facilitate growth in the area.